stages is given below. Larvae; well developed body light green, head light brown, exhibit sexual dimorphism. Male larvae with five violet to reddish stripes measured 20-25 mm. Female larvae 30 mm in length, stripes poorly defined. Crochets are complete and biordinate. Larval period lasted for about 6-9 weeks, during winter. A thin silken cocoon was spun for pupation. Pupae; greenish when freshly formed turned brownish with age. Six anal conspicuous setae were borne by both sexes of pupae: Pupation occurred in the basal stem region or in stubbles and lasted for 14-16 days. Maximum pupation took place at the end of February and moth emergence continued up to middle of March. Adults are stout (20-25 mm) with prominent dark red coloured band on forewings, more deep in females. The female laid yellowish white oval eggs in batches of 5-16 on the wire mesh of cage.

Since rice is attaining importance in the Punjab and the area is on the increase, it is quite likely that *M. separatella* might shift to rice to attain the status of a major pest of that crop in India like in Africa or may prove serious on sorghum. More information is needed on its biology and seasonal abundance on sorghum.

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DEPARTMENT OF ENTOMOLOGY, PUNJAB AGRICULTURAL UNIVERSITY LUDHIANA, June 7, 1973.

G. S. SANDHU RAMESH CHANDER

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25. A NOTE ON THE BEHAVIOUR OF THE DAMMER BEE, MELIPONA IRIDIPENNIS D.

The tiny, dark, dammer bee, *Melipona iridipennis* D. (Apidae: Hymenoptera) inhabits crevices in walls, hollow trunks of trees etc. The sting is not well developed and the combs are made of a mixture of earth or resin and wax. Its honey is supposed to have high medicinal properties even though the honey gathered is only small in quantity.

During July 1973 an interesting behaviour was exhibited by members of this species. Metal labels painted yellow ("Spartan", "Chemolac" and "Kangaroo"-Synthetic enamel-lemon yellow paints) and erected in partly dried condition in the sorghum field in Tamil Nadu Agricultural University, Coimbatore were noticed having clusters of the dammer bees, all actively scraping and collecting the paint. The pollen baskets in each bee were laden with masses of yellow paints scraped from the labels. The scraped areas showed characteristic dull depression and in many instances the scraping was intense that the metal surfaces below the paints were exposed. The same instinct of the bees of collecting paints, being deceived by its colour, was again observed on labels kept for drying after painting. To ascertain whether the attraction was simply for the yellow colour, glass slides painted freshly with white, yellow and green and another set of slides completely dry after painting with the same colours were kept near a dammer bee colony entrance in a crevice and it was found that all colours other than wet yellow were ignored by the insects.

It was felt that the paints so loaded in the pollen baskets might be difficult to be dislodged and hence the possibility was more for the concerned bee to fall a victim to the persistant contact action of the paint and its solvents. There was also the danger of the dislodged paints getting mixed with the wax, resin etc., used for comb construction proving lethal to the whole community. The feasibility of the same being mixed with honey as a normal mixture with pollen for feeding the grubs also could not be ruled out, even though the anxiety might appear as an exaggerated one now.

Therefore further observations were conducted to find out what really happened to the bees collecting paints. Only a very few were found dead in the vicinity of the painted boards and all of them had tinges of paints on their limbs. On opening up of a colony within the crevices of a wooden frame, where the paints collecting bees frequented, comparatively large numbers of workers were found dead and the pollen baskets had heavy masses of paints in these cases. However, there were no signs of mixing up of these paints with the wax inside, indicating that the bees could not dislodge the paints gathered by them and all of them fell victim to the paints.

This phenomenon is very significant which leads the bees to selfdestruction. To safeguard these productive insects, field labels should be painted and dried well if yellow colour is to be used, where these bees are known to exist.

ENTOMOLOGY DEPARTMENT, TAMIL NADU AGRL. UNIVERSITY, COIMBATORE 641 003, December 15, 1973. A. ABDUL KAREEM M. S. VENUGOPAL S. SADAKATHULLA T. R. SUBRAMANIAM

26. ECOLOGICAL NOTES ON THE INDIAN FRESHWATER MICROTURBELLARIA: *MESOSTOMA* SP.

While the taxonomy and distributional ecology of the freshwater and land planarians (Triclad turbellarians) of India have been studied in some detail by Whitehouse (1913, 1914, 1919), Kawakatsu (1969), Kawakatsu & Basil (1971), the freshwater microturbellarians are meagrely known. The purpose of this short paper is to present the results of an ecological investigation into the occurrence of *Mesostoma* species in the vicinity of Madurai in south India. The material was obtained by us from several localities during the course of the collection of freshwater planarians described in a previous paper (cf. Kawakatsu & Basil 1971, pp. 41-42).

> Order NEORHABDOCOELA Suborder Typhloplanoida Family MESOSTOMIDAE Genus MESOSTOMA Ehrenberg 1936

Mesostoma sp.

External Features: A small and oval-shaped species. Live animals c. 2 mm in length and 1 mm in width. The body shows a green coloration. Pharynx is located near the anterior end of the body. *Localities 1 and 11*;

The animals were obtained from two temporary granite quarry pools located in front of the buildings of Madurai University, Palkalai Nagar Campus (about 13 km west of the city of Madurai). Both pools have elevated boundary and are exposed to sunlight. The pools are irregular in shape (Loc. I, $345 \text{ cm} \times 148 \text{ cm}$; Loc. II, $223 \text{ cm} \times 195 \text{ cm}$) and contain muddy, greenish water due to the presence of freshwater green algae. The first pool has a depth of c. 18 cm at its centre (average depth of 15 cm) and the second pool has a depth of c. 12 cm at its centre (average depth 8 cm). The bottom of the pools is muddy and without any large aquatic plants. At the time of the collection of the animals (July 1973) the pools were almost dry. The animals were present only at the edges of the pools.